

What is claimed is:

1. (Currently Amended) A method of treating ~~a disease associated with aberrant microsatellite expansion~~ myotonic dystrophy in a subject, comprising administering to a mammal in need thereof, a therapeutically effective amount of recombinant adeno-associated virus (rAAV) vector comprising a promoter operably linked to a nucleic acid encoding a protein selected from the group consisting of: MBNL1, MBNL2 and MBNL3 protein, wherein expression of the protein results in reducing myotonic dystrophy in the subject ~~containing a transgene that encodes a protein selected from the group consisting of MBNL1, MBNL2, MBNL3, and combinations thereof.~~

2. (Cancelled)

3. (Cancelled)

4. (Original) The method of claim 1, wherein treating comprises reversing the mis-splicing of the Clcn1 skeletal muscle chloride channel.

5. (Original) The method of claim 1, wherein treating comprises reversing the mis-splicing of the Amyloid beta (A4) precursor protein (APP).

6. (Original) The method of claim 1, wherein treating comprises reversing the mis-splicing of the NMDA receptor NR1 (GRIN1).

7. (Original) The method of claim 1, wherein treating comprises reversing the mis-splicing of the Microtubule-associated protein tau (MAPT).

8. (Original) The method of claim 1, wherein treating comprises reversing the mis-splicing of the TNNT2 (cTNT) protein.

9. (Original) The method of claim 1, wherein the protein is MBNL1.

10. (Original) The method of claim 1, wherein the mammal is human.

11. (Original) The method of claim 1, wherein the mammal in need of treatment has RNA inclusions in neuronal cells.

12. (Original) A pharmaceutical composition comprising a recombinant adeno-associated virus (rAAV) containing a transgene that encodes at least one protein selected from the group consisting of MBNL1, MBNL2, MBNL3, and combinations thereof.

13. (Original) The composition of claim 12, wherein the protein is MBNL1.

14. – 29. (Cancelled)

30. (New) A method of treating myotonic dystrophia in a subject, comprising administering to a mammal in need thereof, a therapeutically effective amount of recombinant adeno-associated virus (rAAV) vector comprising a promoter operably linked to a nucleic acid encoding a MBNL1 protein, wherein expression of the protein results in reducing myotonic dystrophia in the subject.

31. (New) A method of treating myotonic dystrophia in a subject, comprising administering to a mammal in need thereof by intramuscular injection, a therapeutically effective amount of recombinant adeno-associated virus (rAAV) vector comprising a promoter operably linked to a nucleic acid encoding a protein selected from the group consisting of: MBNL1, MBNL2 and MBNL3 protein, wherein expression of the protein results in reducing myotonic dystrophia in the subject.

32. (New) A method of treating myotonic dystrophia in a subject, comprising administering to a mammal in need thereof by intramuscular injection, a therapeutically effective amount of recombinant adeno-associated virus (rAAV) vector comprising a promoter operably linked to a nucleic acid encoding a MBNL1 protein, wherein expression of the protein results in reducing myotonic dystrophia in the subject.